

# **Next Generation Sequencing (NGS) Markets 2015 (Systems, Consumables, Services, Acquisitions, Agreements, Competitive Analysis, Platforms, Applications, Brand Ownership and Other Trends)**

<https://marketpublishers.com/r/N11DD06BC4EEN.html>

Date: January 2015

Pages: 391

Price: US\$ 4,200.00 (Single User License)

ID: N11DD06BC4EEN

## **Abstracts**

No business planner in biotechnology or diagnostic equipment or services can ignore the trend of sequencing, and particularly next-generation sequencing. This technology has enabled a wide scope of research and genetic analysis. The promise of DNA sequencing has attracted many companies, researchers, and investors. DNA sequencing has already become a large market, and clinical applications of DNA sequencing are being developed and commercialized. More than ever, marketers of advanced equipment and those investing in those companies need a resource to identify the specific developments in sequencing.

This report, Next-Generation Sequencing Markets (Systems, Consumables, Services, Acquisitions, Agreements, Competitive Analysis, Trends, Platforms, Applications, Brand Ownership) provides evidence of the promise and current excitement in the DNA sequencing market.

### **Tracking the Path of Sequencing to the Clinical Lab**

Many improvements in sequencing technology are needed in order to make sequencing-based diagnostic tests widely available and used by all physicians, though DNA sequencing has successfully penetrated the research market. Applications of next generation sequencing in clinical laboratories and companies with CLIA-certified laboratories will continue to grow. The first next generation sequencing system and IVD tests have been cleared by the FDA, and more will follow. Some next generation sequencing companies are starting to develop and commercialize kits that can be

produced and sold to clinical laboratories following the traditional in vitro diagnostic (IVD) model.

### Reasons for Optimism

Over the years, the DNA sequencing field has gone through periods of excitement (referred to as hype) by some, followed by periods of disappointment as the hoped for advances have not materialized as quickly as hoped or promised.

The promise of DNA sequencing has attracted many companies, researchers, investors, and others. DNA sequencing has already become a large market, and clinical applications of DNA sequencing are being developed and commercialized. Evidence of the promise and current excitement with DNA sequencing can be seen with many recent events:

The DNA sequencing market is growing rapidly. In October 2014, market leader Illumina raised the company's full year 2014 guidance for investors to a revenue growth for the company of approximately 30% over the previous year.

Roche and Foundation Medicine announced an agreement that is worth up to \$1.2 billion. Roche agreed to acquire a majority interest in Foundation Medicine for approximately \$780 million. Roche also agreed to invest \$250 million in Foundation Medicine, and to fund potentially more than \$150 million of R&D

Companies are raising money: In just the first part of January 2015, In addition to Roche's investment in Foundation Medicine, 10X Genomics closed a \$55.5 million Series B financing and Invitae filed for an initial public offering, These follow a busy 2014 year that saw many investments in next generation sequencing companies and companies with products or services related to next generation sequencing.

Agreements with pharmaceutical companies: Companies in the pharmaceutical industry have recognized the potential benefits of next generation sequencing as a research and development tool. During just part of 2015, Genentech announced two agreements, and Pfizer announced one.

Sequencing companies are starting to develop and commercialize kits that can be produced and sold to clinical laboratories following the traditional in vitro diagnostic (IVD) model. Illumina's MiSeqDx was the first cleared in vitro diagnostic (IVD) next generation sequencing system. MiSeqDx is also CE marked, and FDA-cleared tests are

currently available on this platform.

These are just selected highlights of recent activities in this rapidly changing market. Because of these trends, Kalorama expects the market to grow from its current size of 2.2 billion to 5.6 billion. The entire market is broken out in detail in Kalorama's Next Generation Sequencing Markets.

This Informative Analysis Helps You Track These Developments, with Reliable Market Estimates

The report provides the world markets for next generation sequencing in U.S. dollars for 2014 to 2018. As part of its analysis, the following data points are provided.

DNA Sequencing Systems Market Size and Forecast

DNA Sequencing Consumables Market, Size and Forecast

DNA Sequencing Services Market, Size and Forecast

Sequencing Market – Geographical Distribution (US, Europe, Asia, ROW)

Market Share by Major Competitor

Brand Ownership by Platform

DNA Sequencing Market – Research versus Clinical Applications

The sequencing market includes capillary electrophoresis sequencing systems (based on the early Sanger sequencing method) and also the rapidly growing next generation sequencing market. The market estimate includes both sequencing instruments plus consumables.

Who's Doing What In Sequencing: Superior Company Profiling

Competitor participation is an important part of the shaping of this market and the report devotes considerable detail to competitive analysis. Driven by the promise of clinical diagnostic applications, the DNA sequencing market is growing rapidly and companies are raising money. In early 2015 and throughout a busy 2014 there were many

investments in next generation sequencing companies and companies with products or services related to next generation sequencing. Pharmaceutical companies, for example, have recognized the potential benefits of next generation sequencing as a research and development tool. The report provides product information and financial information for over 100 companies that are involved in next generation sequencing including:

10X Genomics

23andMe, Inc.

Adaptive Biotechnologies Corporation

Admera Health (A GENEWIZ Company)

Advanced Biological Laboratories, S.A.

Agilent Technologies Inc.

AltheaDx Diagnostics, Inc.

Ambry Genetics Corp.

Aperiomics, Inc.

Appistry, Inc.

Asuragen, Inc.

Athena Diagnostics, Inc. (A Quest Diagnostics Business)

Base4 Innovation Ltd.

Beckman Coulter, Inc. (Subsidiary of Danaher Corporation)

BGI-Shenzhen

Bina Technologies, Inc. (Acquired by Roche)

BioDiscovery, Inc.

Bioinnovation Solutions SA

Biomatters Ltd.

bioMérieux SA

bioTheragnostics (A bioMérieux Company)

Cancer Genetics, Inc.

CareDx, Inc.

Caris Life Sciences

Chronix Biomedical, Inc.

CLC bio (A QIAGEN Company)

Complete Genomics (A BGI Company)

Courtagen Life Sciences, Inc.

Cypher Genomics, Inc.

DioGenix, Inc.

DNA Electronics Ltd.

DNASTAR, Inc.

Eurofins Genomics

Eurofins MWG Operon Inc. (A Eurofins Genomics Company)

Expression Analysis, Inc. (A Quintiles Company)

Fluidigm Corporation

Foundation Medicine, Inc.

GATC Biotech AG

GenapSys

GenDx

Gene by Gene, Ltd.

Genection, Inc. (An Invivoscribe Company)

GeneDx

GeneInsight, Inc.

GENEWIZ Inc.

Genia Technologies, Inc. (Acquired by Roche)

GenoLogics Life Sciences Software

Genomic Diagnostics Technologies

GenomOncology

Genoptix (A Novartis Company)

GigaGen, Inc.

GnuBIO, Inc. (Acquired by Bio-Rad Laboratories, Inc.)

Good Start Genetics, Inc.

HTG Molecular Diagnostics

Human Longevity, Inc.

Igenbio, Inc.

Illumina, Inc.

Innovations Exchange Pte Ltd (INEX)

iGene Diagnostics Pte Ltd (an INEX Company)

Insight Genetics, Inc.

InSilixa, Inc.

Intel Corporation

Intelligent Bio-Systems, Inc. (A QIAGEN Company)

Invivoscribe Technologies, Inc.

iRepertoire, Inc.

Knome Inc.

Laboratory Corporation of America (LabCorp)

LaserGen, Inc.

LifeCodexx AG (Subsidiary of GATC Biotech AG)

Life Technologies Corporation (Acquired by Thermo Fischer Scientific Inc.)

Mayo Medical Laboratories and Mayo Clinic

MolecularMD Corporation

Multiplicom NV

Nabsys, Inc.

Natera, Inc.

NeoGenomics, Inc./NeoGenomics Laboratories

NetBio, Inc.

NewGene Ltd.

NextCODE Health

NobleGen Biosciences, Inc.

N-of-One, Inc.

OncoDNA SA

OncoPlex Diagnostics (OncoPlexDx)

Oncospire Genomics

One Lambda, Inc. (A Thermo Fisher Scientific Brand)

Oxford Gene Technology

Oxford Nanopore Technologies Ltd.

Pacific Biosciences

Parabase Genomics

Pathway Genomics Corporation

PerkinElmer, Inc.

Personal Genome Diagnostics, Inc.

Personalis, Inc.

PicoSeq



Population Genetics Technologies Ltd.

QIAGEN N.V.

QuantuMDx Group

Quest Diagnostics

RainDance Technologies, Inc.

Response Genetics, Inc.

Roche

SeqLL, LLC

Sequentia, Inc.

Siemens Healthcare Diagnostics

Siemens

Sirona Genomics

SoftGenetics, LLC

Stratos Genomics Inc.

Swift Biosciences, Inc.

Symbiodx

Sysmex Inostics GmbH

Thermo Fisher Scientific, Inc.

Vela Diagnostics

WaferGen Biosystems, Inc.

## ZS Genetics, Inc.

The information presented in this report is derived from publicly available information sources such as company reports and announcements, government reports and databases, medical organization reports, medical associations, and other publications. The analysis is based on the author's industry knowledge combined with literature searches and discussions with industry professionals and experts in the areas of point-of-care tests, decentralized healthcare and healthcare economics.

## Contents

### **ONE: EXECUTIVE SUMMARY**

Overview  
Scope and Methodology  
Market Overview  
Prognosis for Growth of the DNA Sequencing Market

### **TWO: INTRODUCTION**

Overview and History of DNA Sequencing  
Point-of-View

### **THREE: SEQUENCING TECHNOLOGY**

Sanger Sequencing  
Next-Generation Sequencing  
Massively Parallel Signature Sequencing (MPSS)  
Pyrosequencing  
454 TECHNOLOGY  
Sequencing by Synthesis (SBS)  
Supported Oligonucleotide Ligation and Detection (SOLiD)  
Ion Torrent Sequencing  
True Single Molecule Sequencing (tSMS)  
Single Molecule Real Time (SMRT) Sequencing  
DNA Nanoball Sequencing  
Nanopore Sequencing  
Other Sequencing Technologies  
Sample Preparation  
Information Technology  
Sample-to-Answer Workflows or Platforms

### **FOUR: SEQUENCING APPLICATIONS**

Research, Drug Discovery and Development  
Diagnostic Applications of Sequencing  
Cancer Diagnostics  
Genetic Analysis – Inherited Disorders, Prenatal Diagnostics, Postnatal Diagnostics

Infectious Disease Diagnostics  
Human Leukocyte Antigen (HLA) Testing  
Other Diagnostic Applications of Sequencing  
Direct-to-Consumer Genetic Testing Industry

## **FIVE: DEALS – SEQUENCING COMPANIES**

Investments and Financing Agreements for Sequencing Companies  
Agreements with Other Companies  
Acquisitions of Sequencing Companies  
Selected Other Agreements

## **SIX: APPLYING SEQUENCING TO DIAGNOSTICS – MARKET DRIVERS AND CHALLENGES**

Overcoming Technology Hurdles – Sample Preparation and Data Analysis  
Next Generation Sequencing Market Drivers  
Issues and Hurdles Faced by Companies Selling to the Research Market  
Issues and Hurdles Faced by Companies in the Diagnostics Market  
Future Prospects

## **SEVEN: DNA SEQUENCING MARKET ANALYSIS**

DNA Sequencing Market Overview  
Sequencing Market – Geographical Distribution  
Brand Ownership  
DNA Sequencing Market – Research versus Clinical Applications

## **EIGHT: COMPANY PROFILES: NEXT GENERATION SEQUENCING COMPANIES**

10X GENOMICS  
23ANDME, INC.  
Adaptive Biotechnologies Corporation  
Admera Health (A GENEWIZ Company)  
Advanced Biological Laboratories, S.A  
Agilent Technologies Inc.  
Recent Revenue History  
Company Overview  
AltheaDx Diagnostics, Inc.

Ambry Genetics Corp.  
Aperiomics, Inc.  
Appistry, Inc.  
Asuragen, Inc.  
Diagnostic Products  
Genomic Services  
Clinical Lab  
Companion Diagnostics  
Athena Diagnostics, Inc. (A Quest Diagnostics Business)  
Base4 Innovation Ltd  
Beckman Coulter, Inc. (Subsidiary of Danaher Corporation)  
Recent Revenue History  
Company Overview  
Next-Generation Sequencing - Sample Prep  
Beckman Coulter Genomics  
BGI-Shenzhen  
Bina Technologies, Inc. (Acquired by Roche)  
BioDiscovery, Inc.  
Bioinnovation Solutions SA  
Biomatters Ltd.  
bioMérieux SA  
Recent Revenue History  
Company Overview  
bioTheranostics (A bioMérieux Company)  
Cancer Genetics, Inc.  
Recent Revenue History  
Company Overview  
CareDx, Inc.  
Recent Revenue History  
Company Overview  
Caris Life Sciences  
Chronix Biomedical, Inc.  
CLC bio (A QIAGEN Company)  
Complete Genomics (A BGI Company)  
Courtagen Life Sciences, Inc.  
Cypher Genomics, Inc.  
DioGenix, Inc.  
DNA Electronics Ltd.  
DNASTAR, Inc.

Eurofins Genomics  
Eurofins MWG Operon Inc. (A Eurofins Genomics Company)  
Expression Analysis, Inc. (A Quintiles Company)  
Fluidigm Corporation  
Recent Revenue History  
Company Overview  
Foundation Medicine, Inc.  
Recent Revenue History  
Company Overview  
GATC Biotech AG  
GenapSys  
GenDx  
Gene by Gene, Ltd.  
Genection, Inc. (An Invivoscribe Company)  
GeneDx  
GeneInsight, Inc.  
GENEWIZ Inc.  
Genia Technologies, Inc. (Acquired by Roche)  
GenoLogics Life Sciences Software  
Genomic Diagnostics Technologies  
GenomOncology  
Genoptix (A Novartis Company)  
GigaGen, Inc.  
GnuBIO, Inc. (Acquired by Bio-Rad Laboratories, Inc.)  
Good Start Genetics, Inc.  
HTG Molecular Diagnostics  
Human Longevity, Inc.  
Igenbio, Inc.  
Illumina, Inc.  
Recent Revenue History  
Company Overview  
Innovations Exchange Pte Ltd (INEX)  
iGene Diagnostics Pte Ltd (an INEX Company)  
Insight Genetics, Inc.  
InSilixa, Inc.  
Intel Corporation  
Recent Revenue History  
Company Overview  
Intelligent Bio-Systems, Inc. (A QIAGEN Company)

Invitae Corporation  
Recent Revenue History  
Company Overview  
Invivoscribe Technologies, Inc.  
iRepertoire, Inc.  
Knome Inc.  
Laboratory Corporation of America (LabCorp)  
Recent Revenue History  
Company Overview  
LaserGen, Inc.  
LifeCodexx AG (Subsidiary of GATC Biotech AG)  
Life Technologies Corporation (Acquired by Thermo Fischer Scientific Inc.)  
Recent Revenue History  
Company Overview  
Mayo Medical Laboratories and Mayo Clinic  
MolecularMD Corporation  
Multiplicom NV  
Nabsys, Inc.  
Natera, Inc.  
NeoGenomics, Inc./NeoGenomics Laboratories  
Recent Revenue History  
Company Overview  
NetBio, Inc  
NewGene Ltd.  
NextCODE Health  
NobleGen Biosciences, Inc.  
N-of-One, Inc.  
OncoDNA SA  
OncoPlex Diagnostics (OncoPlexDx)  
Oncospire Genomics  
One Lambda, Inc. (A Thermo Fisher Scientific Brand)  
Oxford Gene Technology  
Oxford Nanopore Technologies Ltd.  
Pacific Biosciences  
Recent Revenue History  
Company Overview  
Parabase Genomics  
Pathway Genomics Corporation  
PerkinElmer, Inc.

Recent Revenue History  
Company Overview  
Personal Genome Diagnostics, Inc.  
Personalis, Inc.  
PicoSeq  
Population Genetics Technologies Ltd  
QIAGEN N.V.  
Recent Revenue History  
Company Overview  
QuantuMDx Group  
Quest Diagnostics  
Recent Revenue History  
Company Overview  
RainDance Technologies, Inc.  
Response Genetics, Inc.  
Recent Revenue History  
Company Overview  
Roche  
Recent Revenue History  
Company Overview  
SeqLL, LLC  
Sequentia, Inc  
Siemens Healthcare Diagnostics  
Siemens  
Recent Revenue History  
Company Overview  
Sirona Genomics  
SoftGenetics, LLC  
Stratos Genomics Inc.  
Swift Biosciences, Inc.  
Symbiodx  
Sysmex Inostics GmbH  
Thermo Fisher Scientific, Inc.  
Recent Revenue History  
Company Overview  
Vela Diagnostics  
WaferGen Biosystems, Inc.  
Recent Revenue History  
Company Overview



ZS Genetics, Inc.

## List Of Exhibits

### LIST OF EXHIBITS

#### ONE: EXECUTIVE SUMMARY

Table 1-1: Worldwide Sequencing Market Product Revenues (Instruments and Consumables), 2014 and 2019

Figure 1-1: Worldwide Sequencing Market Product Revenues (Instruments and Consumables), 2014 and 2019

#### THREE: SEQUENCING TECHNOLOGY

Table 3-1: Sequencing Technologies and Platforms

Table 3-2: Selected Companies Developing/Marketing Products for NGS Sample Preparation

Table 3-3: Selected Companies Developing/Marketing NGS Information Technology Solutions

Table 3-4: Selected Companies Developing NGS Sample-to-Answer Platforms

#### FOUR: SEQUENCING APPLICATIONS

Table 4-1: Selected Companies Developing or Marketing Next Generation Sequencing Products or Services for Research Applications

Table 4-2: Selected Pharmaceutical Companies That Made Deals to Access Next Generation Sequencing Technologies or Capabilities

Table 4-3: Selected Diagnostic Companies Offering Sequencing-Based Tests through Their Own CLIA-Certified Laboratory and Selected Reference Laboratories Offering Sequencing-Based Tests

Table 4-4: Selected Diagnostic Companies Developing or Marketing Sequencing-Based Tests as Kits Sold to Clinical Laboratories

Table 4-5: Selected Companies Offering Products/Services for Applications of Next Generation Sequencing in Oncology

Table 4-6: Selected Companies Offering Products/Services for Applications of Next Generation Sequencing in Genetic Analysis (Inherited Disorders, Prenatal and Postnatal Diagnostics)

Table 4-7: Selected Companies Offering Products/Services for Applications of Next Generation Sequencing in Infectious Diseases

Table 4-8: Selected Companies Offering Products/Services for Applications of Next

Generation Sequencing in Human Leukocyte Antigen (HLA) Testing

Table 4-9: Selected Companies Offering Products/Services for Applications of Next Generation Sequencing in Other Diagnostic Applications

## **FIVE: DEALS – SEQUENCING COMPANIES**

Table 5-1: Selected Investment and Other Financing Agreements for Next Generation Sequencing Companies (Includes IT Companies in NGS)

Table 5-2: Selected Agreements between Next Generation Sequencing Companies and Other Diagnostic Companies or Clinical Laboratories (Includes IT Companies in NGS)

Table 5-3: Selected Agreements between Next Generation Sequencing Companies and Pharmaceutical or Biopharmaceutical Companies (Includes Contract Research Organizations Providing Services to Pharma Companies)

Table 5-4: Selected Company Agreements between Two Next Generation Sequencing Companies (Includes IT Companies in NGS)

Table 5-5: Selected Other Next-Generation Sequencing Company Agreements (Includes IT Companies in NGS)

Table 5-6: Selected Acquisitions of Next Generation Sequencing Companies (Includes IT Companies in NGS)

Table 5-7: Selected Next Generation Sequencing Company Agreements with Academic or Other Non-Profit Organizations (Includes IT Companies in NGS)

## **SEVEN: DNA SEQUENCING MARKET ANALYSIS**

Table 7-1: Instrument Revenue, DNA Sequencing Market, Worldwide, 2014 and 2019

Table 7-2: Consumables Revenue, DNA Sequencing Market, Worldwide, 2014 and 2019

Table 7-3: Services Revenue, DNA Sequencing Market, Worldwide, 2014 and 2019

Table 7-4: Total DNA Sequencing Market, Worldwide, 2014 and 2019

Figure 7-1: Next Generation Sequencing Market (Instruments, Consumables, Systems), 2014 vs. 2019

Figure 7-2: Market Share of DNA Sequencing Market, by Company

Table 7-5: DNA Sequencing Revenues by Geographical Region, Worldwide, 2014 and 2019 (North America, Europe, Asia, Rest of World, Total Market)

Figure 7-3: Next Generation Sequencing System Ownership by Country, Percentage (United States, China, Germany, UK, South Korea, Spain, Canada, France, Australia, Netherlands, Italy, Taiwan, Brazil, Japan, India, Sweden, Belgium, Denmark, Switzerland, Singapore, Saudi Arabia, Others)

Figure 7-4: Next Generation Sequencing System Ownership by Brand (HiSeq2000,

Genome Analyser, Roche 454, ABI SOLiD, Ion Torrent, MiSeq, Ion Proton, Pacific Biosciences, Oxford Nanopore MinION, Polonator, NextSeq)

Figure 7-5: DNA Sequencing Market – Research versus Clinical Applications, 2014

## I would like to order

Product name: Next Generation Sequencing (NGS) Markets 2015 (Systems, Consumables, Services, Acquisitions, Agreements, Competitive Analysis, Platforms, Applications, Brand Ownership and Other Trends)

Product link: <https://marketpublishers.com/r/N11DD06BC4EEN.html>

Price: US\$ 4,200.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/N11DD06BC4EEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below

and fax the completed form to +44 20 7900 3970